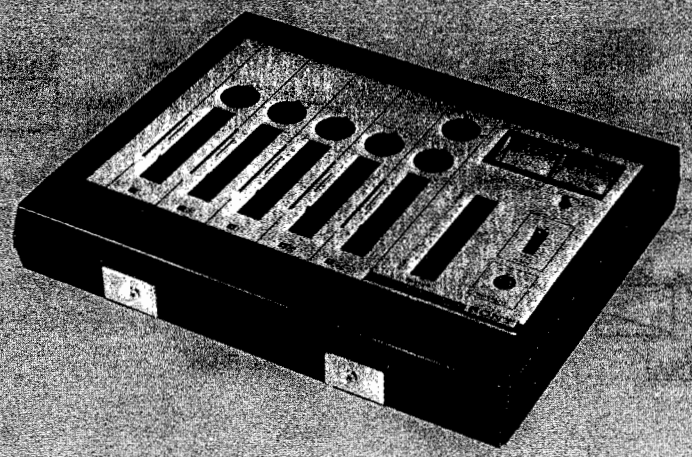
MX-510

AEP Model
USA Model
UK Model
E Model



5-CHANNEL MIXER

SPECIFICATIONS

Power Requirement: 12 V DC — size "C" battery (1.5 V) x 8
AC operation with the use of Sony Power Adaptor AC-12 (optional)

Power Consumption: 0.4 W

Battery Life: Approx. 60 hours of continuous operation (with Sony long-life batteries, size "C")

Inputs:
MICROPHONE (phone type) 5
Sensitivity: 0.2 mV (—72 dB)
Accept low impedance microphones.
LINE IN (phono type) 3
Sensitivity: 60 mV (—22 dB)
Input impedance: 100 kΩ
PHONO (phono type) 2
Sensitivity: 2.2 mV (—51 dB)
Input impedance: 50 kΩ
Built-in RIAA equalization network

Outputs:
LINE OUT (phono type) 2
Rated output level: 0.435 V (—5 dB)
Load impedance: more than 10 kΩ
HEADPHONE (binaural type) 1
Rated output level: 49 mV (—24 dB)
Load impedance: 8 Ω

Frequency Response: 30 — 25,000 Hz

Distortion: 0.5 %

Signal-to-Noise Ratio: 60 dB

Dimensions: Including projecting parts and controls.
Approx. 348 (w) x 75 (h) x 240 (d) mm
13 ¾ (w) x 3 (h) 9 ½ (d) inches

Weight: Approx. 3 kg (6 lb 10 oz) with batteries

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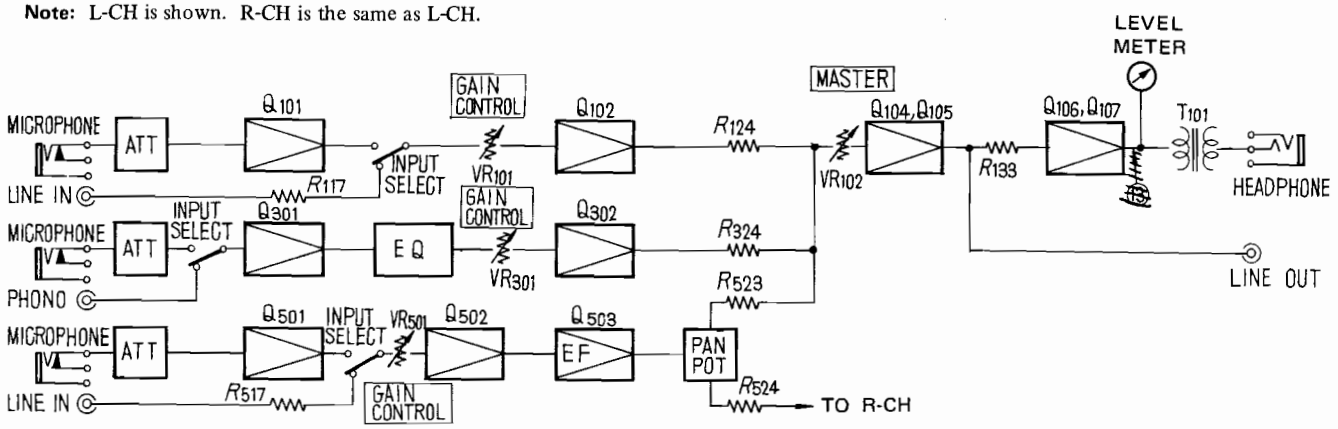
SECTION 1
OUTLINE

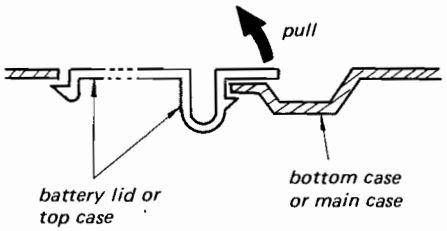
1-1. BLOCK DIAGRAM

Note: L-CH is shown. R-CH is the same as L-CH.



1-2. DISASSEMBLY

1) Top Case and Battery Lid Removals



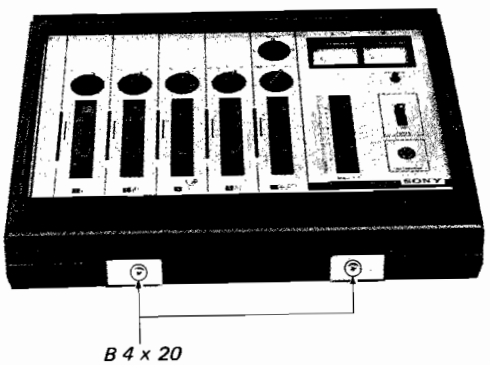
2) Bottom Case and Main Chassis Removals

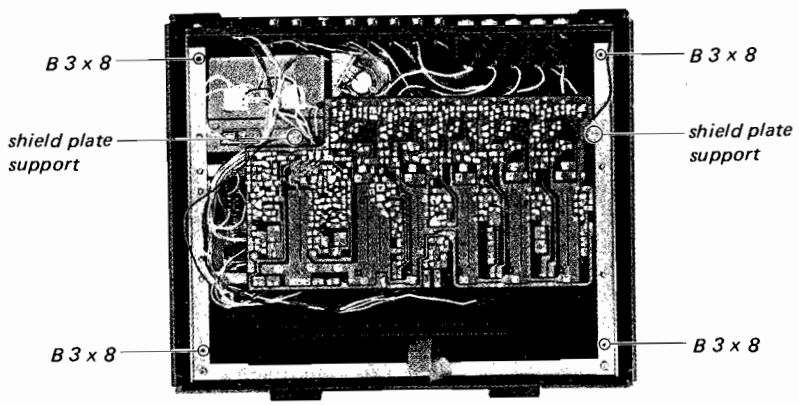
– Bottom Case –

First, remove the battery lid and batteries and remove four screws B 3 x 8 which secures the bottom case.

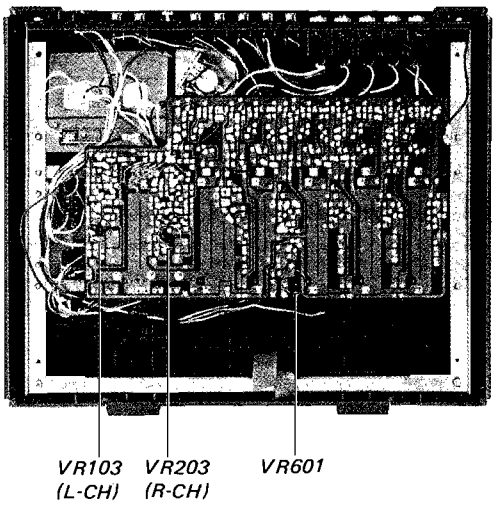
– Main Chassis –

- Remove the shield plate by removing two screws PS 3 x 6 and two solder lugs.
- Remove two shield plate supports as shown in the above photograph.
- Remove the carrying handle by removing two screws B 4 x 20.





SECTION 2
ADJUSTMENTS

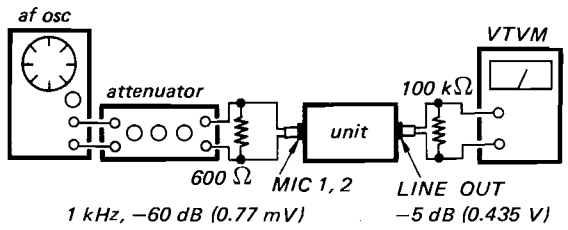


1. LEVEL METER CALIBRATION

Setting:

Power source:	12 V DC
MASTER control:	maximum
MIC-ATT-LINE IN switch:	MIC
POWER switch:	ON

Procedure:

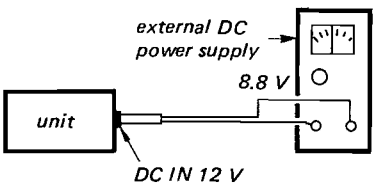


1. Adjust GAIN control to obtain −5 dB (0.435 V) at LINE OUT.
2. Adjust VR103 and VR203 to obtain 0 dB indication on the VU meters.

2. BATT CHECK ADJUSTMENT

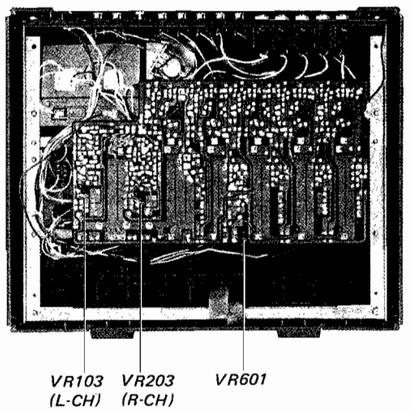
Setting:

Power source:	external 8.8 V DC
BATT CHECK switch:	pushed
POWER switch:	ON



Adjust VR601 to obtain 0 dB indication on the VU R meter.

SECTION 2
ADJUSTMENTS

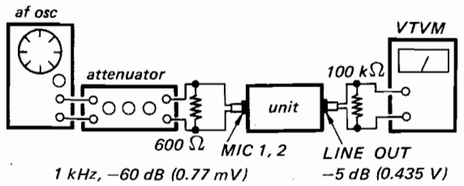


1. LEVEL METER CALIBRATION

Setting:

Power source:	12 V DC
MASTER control:	maximum
MIC-ATT-LINE IN switch:	MIC
POWER switch:	ON

Procedure:

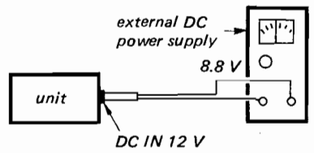


1. Adjust GAIN control to obtain −5 dB (0.435 V) at LINE OUT.
2. Adjust VR103 and VR203 to obtain 0 dB indication on the VU meters.

2. BATT CHECK ADJUSTMENT

Setting:

Power source:	external 8.8 V DC
BATT CHECK switch:	pushed
POWER switch:	ON



Adjust VR601 to obtain 0 dB indication on the VU R meter.

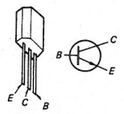
SECTION 3
DIAGRAMS

3-1. MOUNTING DIAGRAM

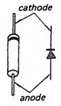
— Conductor Side —

Q101, 102, 104, 201, 202, 204, 301, 302, 401, 402, 501, 502 — 2SC631A

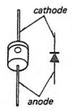
Q105, 106, 107, 205, 206, 207 503, 601 — 2SC633A

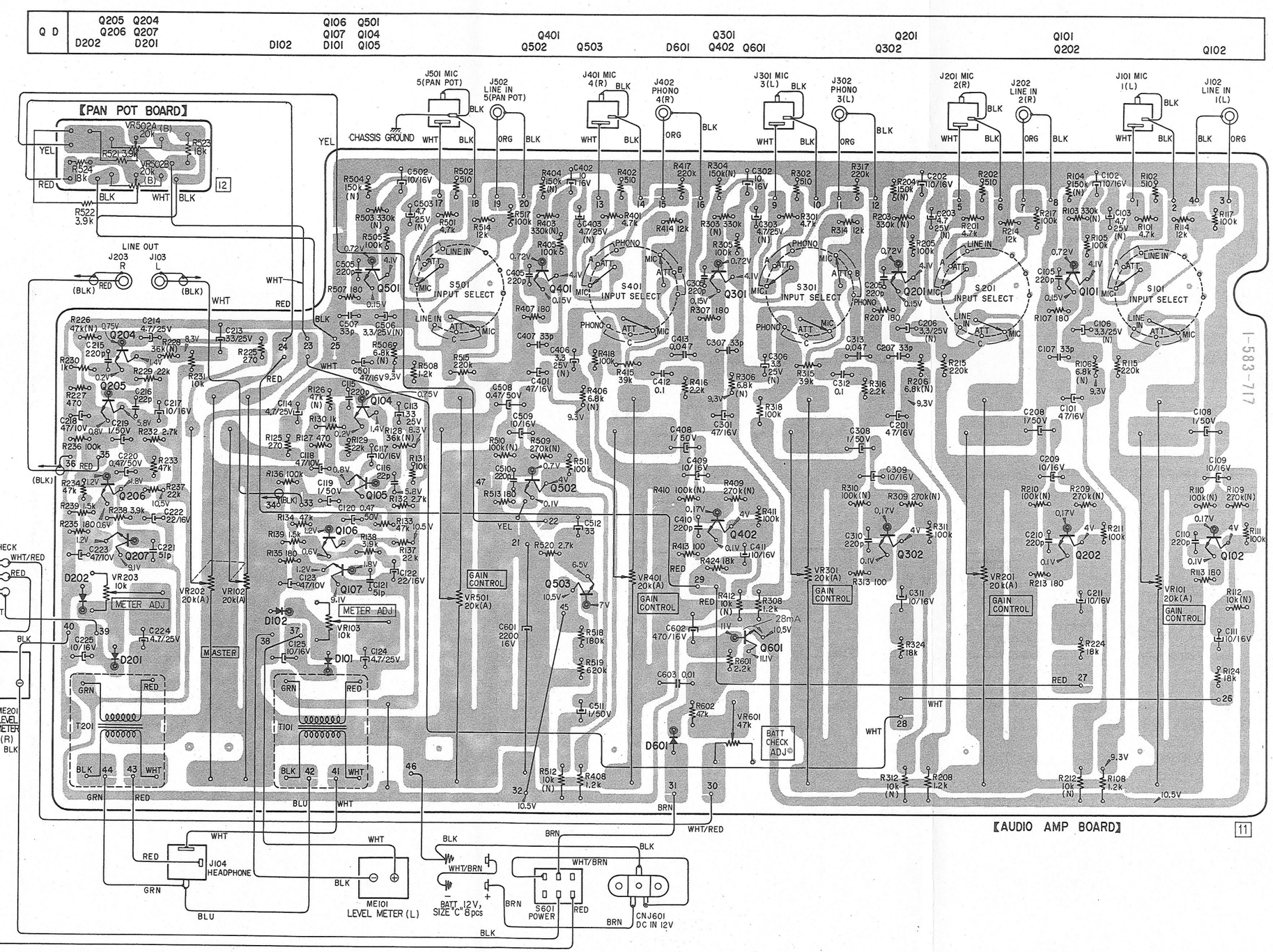


D101, 102, 201, 202 — 1T22

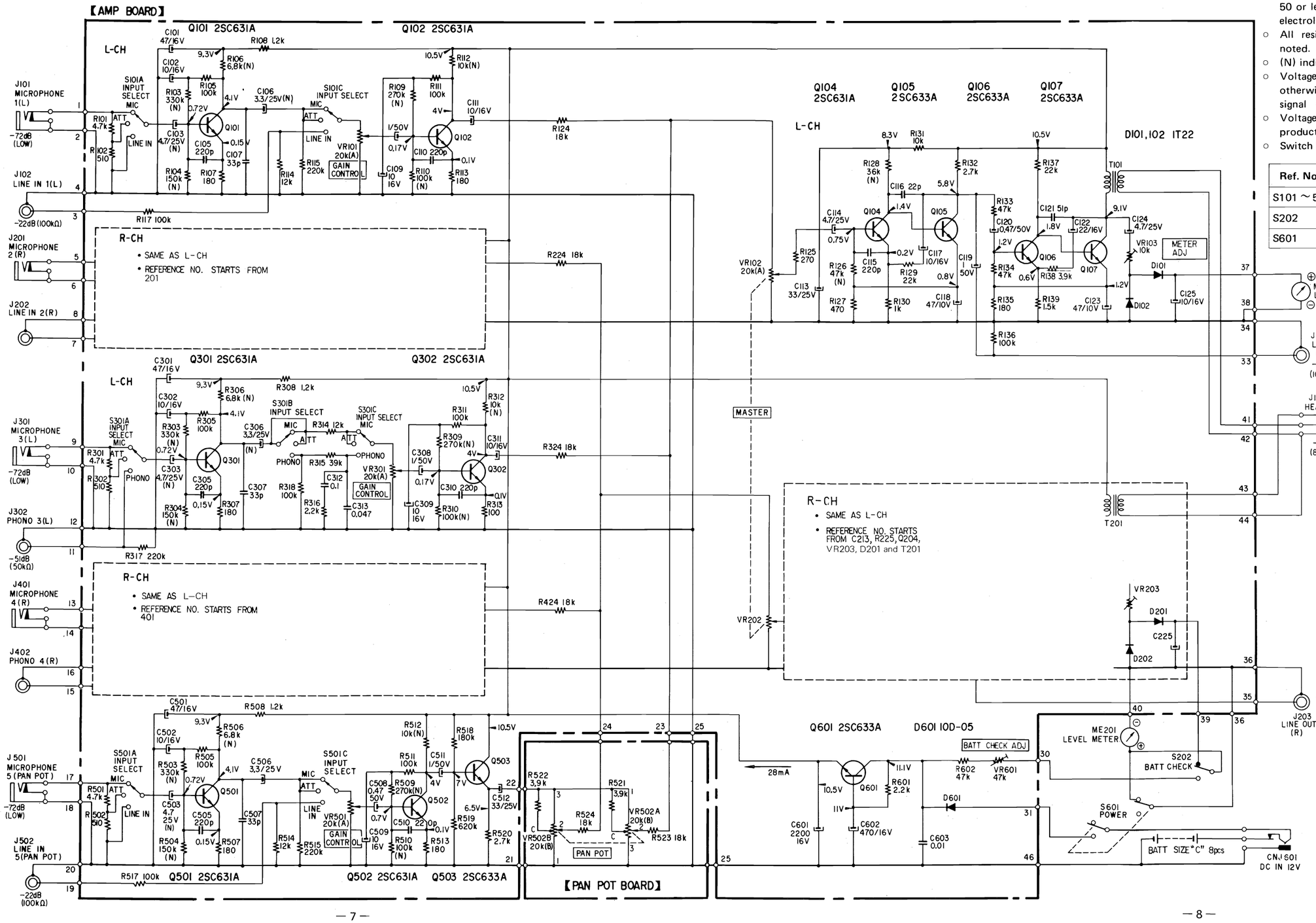


D601: 10D-05





3-2. SCHEMATIC DIAGRAM



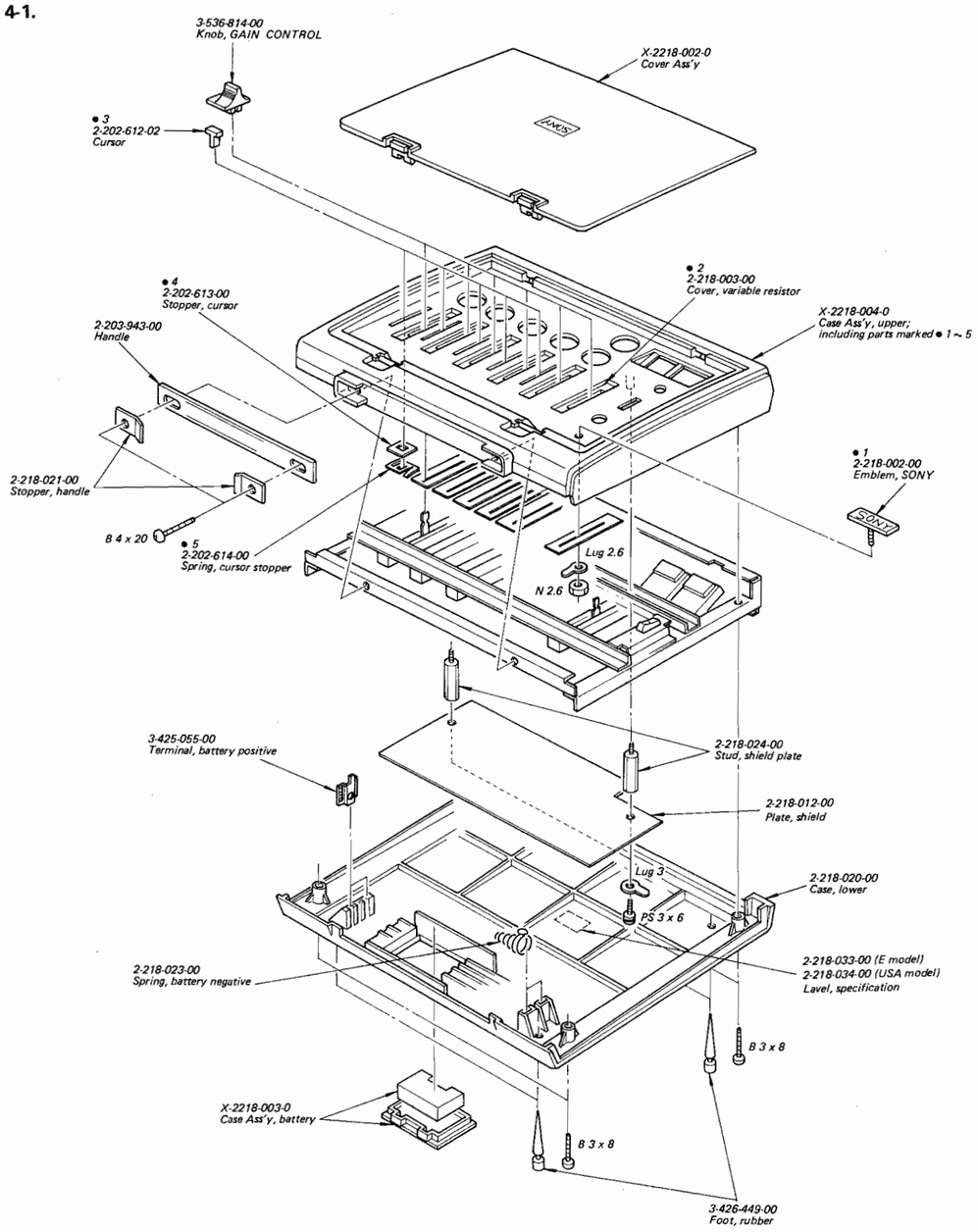
Note:

- All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type. p = μμF
- All resistors are in Ω, ¼W, unless otherwise noted. k = 1,000, M = 1,000 k
- (N) indicates a low-noise resistor.
- Voltages are DC with respect to ground unless otherwise noted. Readings taken under no-signal conditions with a VOM (20 kΩ/V).
- Voltage variations may be noted due to normal production tolerances.
- Switch Mode:

Ref. No.	Switch	Position
S101 ~ 501	INPUT SELECT	MIC
S202	BATT CHECK	OFF (LEVEL)
S601	POWER	OFF

SECTION 4
EXPLODED VIEWS

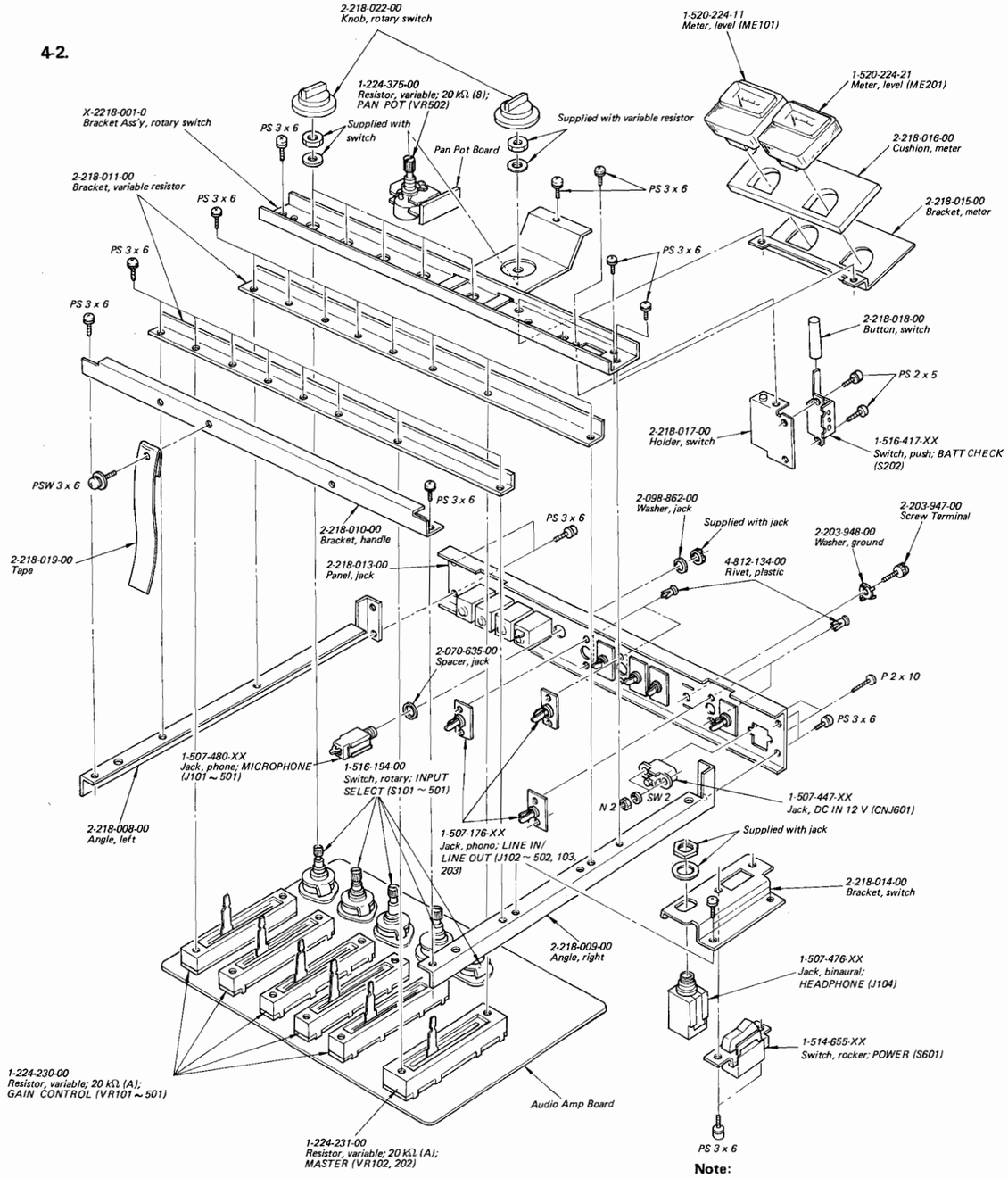
4-1.



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head

4-2.



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head

SECTION 5
ELECTRICAL PARTS LIST

Ref. No.	*Part No.*	*Description*
	SEMICONDUCTORS	
	Transistors	
	Q101 ~ 501: Q101, 201, 301 . . . . . , Q501	
Q101 ~ 501		
202 ~ 502	2SC631A	
104, 204		
Q105 ~ 107		
205 ~ 207	2SC633A	
503, 601		
	Diodes	
D101, 102		
201, 202	1T22	
D601	10D-05	

CAPACITORS

All capacitors are in μF and of electrolytic unless otherwise noted. (p = μμF)
50 or less working volts are omitted except for electrolytic type.
C101 ~ 501: C101, 201, 301 . . . . . , C501

C101 ~ 501	1-121-409-11	47	16V	
C102 ~ 502	1-121-651-11	10	16V	
C103 ~ 503	1-121-915-11	4.7	25V	low noise
C105 ~ 505	1-107-139-11	220p		silvered mica
C106 ~ 506	1-121-913-11	3.3	25V	low noise
C107 ~ 507	1-107-119-11	33p		silvered mica
C108 ~ 408	1-121-391-11	1	50V	
C109 ~ 509	1-121-651-11	10	16V	
C110 ~ 510	1-107-139-11	220p		silvered mica
C111 ~ 411	1-121-651-11	10	16V	
C113, 213	1-121-404-11	33	25V	
C114, 214	1-121-395-11	4.7	25V	
C115, 215	1-107-139-11	220p		silvered mica
C116, 216	1-107-115-11	22p		silvered mica
C117, 217	1-121-651-11	10	16V	
C118, 218	1-121-352-11	47	10V	
C119, 219	1-121-391-11	1	50V	
C120, 220	1-121-726-11	0.47	50V	
C121, 221	1-107-124-11	51p		silvered mica
C122, 222	1-121-479-11	22	16V	
C123, 223	1-121-352-11	47	10V	
C124, 224	1-121-395-11	4.7	25V	
C125, 225	1-121-651-11	10	16V	
C312, 412	1-106-049-12	0.1		mylar
C313, 413	1-106-041-12	0.047		mylar
C508	1-121-726-11	0.47	50V	
C511	1-121-391-11	1	50V	
C512	1-121-404-11	33	25V	
C601	1-119-140-11	2200	16V	
C602	1-121-426-11	470	16V	
C603	1-106-082-12	0.01		mylar

RESISTORS

All resistors are in ohms. Regular type ¼W corbon and composition resistors are omitted. Check the schematic diagram for the resistance Values. (k = 1000, M = 1000 k)
R103 ~ 503: R103, 203, 303 . . . . . , R503

R102 ~ 503	1-242-733-11	330k	¼W	carbon	low noise
R104 ~ 504	1-242-725-11	150k	¼W	carbon	low noise
R106 ~ 506	1-242-693-11	6.8k	¼W	carbon	low noise
R109 ~ 509	1-242-731-11	270k	¼W	carbon	low noise
R110 ~ 510	1-242-721-11	100k	¼W	carbon	low noise
R112 ~ 512	1-242-697-11	10k	¼W	carbon	low noise
R126, 226	1-242-713-11	47k	¼W	carbon	low noise
R128, 228	1-242-710-11	36k	¼W	carbon	low noise

VR101 ~ 501	1-224-230-00 20k (A), variable; GAIN CONTROL
VR102, 202	1-224-231-00 20k (A), variable; MASTER
VR103, 203	1-224-645-XX 10k (A), adjustable; level meter
VR502	1-224-375-00 20k (B), variable; PAN POT
VR601	1-224-647-XX 47k, adjustable; BATT CHECK

SWITCHS

S101 ~ 501: S101, 201, 301 . . . . . , S501

S101 ~ 501	1-516-194-00 rotary, INPUT SELECT
S202	1-516-417-XX push, BATT CHECK
S601	1-514-655-XX rocker, POWER

Ref. No.	Part No.	Description
	JACKS	
	J101 ~ 501: J101, 201, 301 . . . . . , J501	
CNJ601	1-507-447-XX	DC IN 12V
J101 ~ 501	1-507-480-XX	phone, MICROPHONE
J102 ~ 502 103, 203	1-507-176-XX	phone, LINE IN/LINE OUT
J104	1-507-476-XX	binaural, HEADPHONE

Ref. No.	Part No.	Description
	MISCELLANEOUS	
ME101	1-520-224-11	meter, level
ME201	1-520-224-21	meter, level
T101, 201	1-427-359-00	transformer, output
	ACCESSORIES	
	X-2218-005-0	cushion ass'y
	1-528-026-00	battery, size C, SUM-2
	1-534-049-31	cord, RK-74
	3-780-558-21	manual, instruction

SECTION 6
HARDWARE

Part No.		Description
	SCREWS	
	All screws are Phillips (cross recess) type unless otherwise noted. (–): slotted head	
7-628-253-03	PS	2 x 5
7-682-128-05	P	2 x 10
7-682-548-05	B	3 x 8
7-682-566-04	B	4 x 20
7-682-647-01	PS	3 x 6
7-682-947-01	PSW	3 x 6
	MISCELLANEOUS	
7-622-105-05	nut 2	
7-623-205-12	spring washer 2	
7-623-508-11	earth lug 3	

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9-954-366-01

5H0469-1
Printed in Japan